STORIES WE TELL ABOUT FAUNA

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I explore the connections between the continuing reduction of biodiversity and the stories we tell about fauna. The majority of these stories are strongly scientific in content and form, usually emphasising rationality and the control and exploitation of nature. Some stories may also function to preserve cultural boundaries. Very few are poetical and imaginative in form. Consequently, I argue that — in conjunction with the highly urbanized life styles in Australia — most people see the stories as outside their culture. Not only are the stories 'outside', so are the animals. Unless most Australians, particularly public administrators and politicians, gain empathy with the non-human world, the processes of public administration and forward planning will be ineffectual — if not detrimental — for a safe future for our biodiversity. As scientists, we can help by telling different stories. □*Biodiversity, conservation, invertebrates, vertebrates, communication, culture, stories, ethics, morality, science, folk.*

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At this conference we are discussing invertebrate biodiversity and there is one fact of which we are all aware: the biodiversity of the world is under siege. It is under siege as forests are felled, as urbanisation continues across the landscape, and as land and water are polluted and degraded. The non-human (which is usually called natural — but in what way are we unnatural?) world is being colonised by humans and their artefacts, with an ensuing loss of ecosystems, habitats and species.

Yet, despite this destruction, the human behaviours that cause it do not seem to be changing and many of us often ask each other, 'What can be done to halt this great loss, this extinction of species and of spirit?' I suggest we need to look at our behaviour as scientists. And we have some changing to do. I argue that we need to think about, speak about and interact with the non-human part of our world in different ways.

To understand how this might be done, we need to explore what is it that scientists are saying to people about this world we live in. And one way to do this is to explore the stories[1] we tell about the non-human world, specifically the fauna.

Such an exploration is heuristic. We can learn for ourselves about ourselves: we can come to appreciate the special ways we use symbols and how these influence our own behaviours and that of others. Humans have always used metaphors, including ones involving animals, to explain and rationalise themselves to themselves — and scientists are no different. I contend, that in our stories about fauna, we can discover the detrimental aspects of our behaviour and change them. We can change them by fashioning different ways of speaking about, and relating to, the non-human world and ourselves. This will entail telling different stories with different explanations.

Culturally, through different explanations, we may be more able to appreciate and respect animals other than ourselves. It is worth the try. If we modify our explanations of the world, if we explain ourselves to ourselves differently, perhaps we will also modify our adverse interactions with, and impacts upon, the world in which we live.

ANIMAL STORIES
A PERSONAL REFLECTION

What stories do we tell about our fauna? and what stories about our fauna are important for people living in our culture? I first began to explore these question when I started to give

[1]I argue that humans have always told stories to themselves to explain the world and their human condition. Some would regard the use of the term 'story' as one that trivialise these explanations. I do not use the term in a trivial sense. Others argue that there are explanations that either true and or not. I regard all these as stories. Every story in its way provides us with a further explanation of ourselves.

public talks and lead outings some years ago. The answers were important for successfully performing these tasks.

(More recently, I have wondered about the same questions because of the lack of response from the community in general, and administrators in particular, to the promotion and conservation of biodiversity. Here the answers were important for understanding failure).

When I tell a story about this animal or that, what do people actually hear? What does it mean to them? The audiences I most often address comprise middle class parents and children who live in urban landscapes. Notably, with these audiences, activities based on natural history and bush experiences are considered suitable and important for children although it has not ever been clear to me whether or not the activities are considered suitable or important for adults.

The stories I tell are the stories that were told to me by my family and my teachers, mostly the latter. There was the story my grandfather told me of the hoop snake, which rolls itself into a hoop and attains frightening speeds as it rushes down hills; and the poems my mother read to me about the mythical Bunyip. Take, for example, this description (Stewart, 1973) of the beast and its habitat:

The water down the rocky wall
Lets fall its shining stair;
The bunyip in the deep green pool
Looks up it to the air.
The kookaburra drank, he says, then shrieked at me with laughter,
I dragged him down in a hairy hand and ate his thighbones after;
My head is bruised with falling foam, the water blinds my eye
Yet I will climb that water fall and walk upon the sky.

The turpentine and stringybark,
The dark red bloodwoods lean
And drop their shadows in the pool
With blue sky in between.

A beast am I, the bunyip says, my voice a drowning cow's,
Yet am I not a singing bird amongst these waving boughs?
I raise my black and dripping head, I cry a bubbling cry,
For I shall climb the trunks of trees to walk upon the sky.

Gold and red the gum trees glow,
Yellow gleam the ferns;
The bunyip in the crimson pool
Believes the water burns.

I know the roots of rocks, he says, I know the door of hell;
I ate the blackman's daughter once, I know my faults full well;
Yet sunset walks between the trees and sucks the water dry,
And when the whole world's burnt away I'll walk upon the sky.

The little frogs they call like bells,
The bunyip swims alone;
Across the pool the stars are laid
Like stone by silvery stone.

What did I do before I was born, the bunyip asks the night;
I looked at myself in the water's glass and nearly died of fright;
Condemned to haunt a pool in the bush while a thousand years go by–
Yet I walk on the stars like stepping stones and I'll climb them into the sky.

A lady walks across the night
And sees a mirror there;
Oh, is it for herself alone
The moon lets down her hair?

The yabbie's back is green for her, his claws are opal-blue,
Look for my soul, the bunyip says, for it was a jewel too.
I bellowed with woe to the yabbie once, but all I said was a lie,
For I'll catch the moon by her silver hair and dance her around the sky.

A STUDENT'S PERSPECTIVE

Most of the stories I learnt, however, were as a student. I learnt about the cockroach, the shark and the toad in studies of vertebrates. The emphasis was on the evolutionary history of vertebrates with little attention to Australian fauna. In fact little was known about the Australian native vertebrate fauna at that time. Studies of invertebrates included more examples of Australian animals, as well as field trips to the sea shore. The invertebrate stories I learnt were those found in such text books as *Animals without backbones* (Buchsbaum, 1951). And Barnes (1980: 1-7):

> There are over a million described species of animals. Of this number 5% possess a backbone and are known as vertebrates. All other comprising the greater part of the Animal Kingdom are invertebrates.
>
> Division of the Animal Kingdom into vertebrates and invertebrates is artificial and reflects a historical human bias in favour of man's own relatives. One characteristic of a whole sub-phylum of animals is used as the basis for the separation of the entire Animal Kingdom into two groups. One could just as logically divide the entire animal kingdom into mollusks and non-mollusks or arthropods and non-arthropods. The latter classification could be supported at least from the standpoint of numbers, since approximately 85 per cent of all animals are arthropods,...
>
> The Animal kingdom is generally believed to have originated in Archaeozoic oceans long before the first fossil record. Every major phylum of animals has at least some marine representatives....
>
> In subsequent chapters the evolutionary histories of the various phyla are explored. Their evolutionary history is frequently used as a

basis for understanding the adaptive diversity within the phylum or class.

Thus, the first animal stories I learnt were overwhelming the animal stories of science — of Linnean classification. And of structure, function, adaptation, reproductive strategies, and relationships. The context in which these stories were embedded was usually an evolutionary one. It was only towards the end of my undergraduate training that I learnt about another context — the ecological one. At university I did not learn any stories about alternative systems of classification (although I learnt of these later when I lived in different cultures: Dwyer & Plowman, 1981). Sometimes, I did learn stories about animals that were dangerous to man, useful to man and some that were eaten by man. But even this information was not often proffered.

ANIMAL STORIES I HAVE TOLD

These were the stories I usually told when I gave public talks. Occasionally I experimented. I asked the audience questions such as, 'What do you think of when you hear the word kangaroo or koala?' — an exploration in symbols. Sometimes I spoke about the natural history of an animal. For example, flying foxes. I talked about their ways and I took flying foxes to talks and showed people them. I would ask people to hold one. 'Overcome your resistance and feel this animal; feel, listen and smell', I said. And sometimes I read a poem that seemed to me to be particularly evocative of Brisbane.

And it was evocative and potentially disruptive. So much so, now I rarely read out the poem (Shapcott, 1969). It is outside the bounds of empiricism and into subjective associations: another animal and the self. Yet it is a story many know.

She tosses and rumples alone on the double bed:
when, damn him, when will his car cringe in
through their gate and clatter over the one loose
stone
to announce his coming? Her life has become a
code
of sound, a mesh of reassurances
and locks. She wills herself still and tight. No use,
each minute drums with the wrong silence, the
wrong noise
on the rigid tendons of her own unease.

And still she waits, as tensely as she listens, and hears
in the rank-growing neighbour pawpaw-tree outside
a marauding flying-fox circle and flap and cling
scooping the ripe air, gripping with clawed wings
at its easy quarry, the fleshy neglected fruit,
and tear through its shallow skin, and feast on it.

And what were stories I told that aroused the most interest? There was the story of Antechinus, the marsupial mouse, where the males, in one season, mated then died in a collapse of all their bodily functions. The females go on to rear their young alone (Plowman, 1987). Another story of interest was of species of Collembola in which males and females lead separate lives not even meeting for reproduction. Sex is the male depositing sperm packets for the female to chance upon. When the female finds a sperm package she first evaluates it. If fresh, she collects the package to fertilise her eggs, if not — she eats it (CSIRO, 1991). Another story that generated interest was concerned with butterflies that drank the tears of cows and turtles (Hand, 1991).

ANIMAL STORIES AND POPULAR CULTURE

What other stories are there about animals in the public domain? I decided to spend a morning researching this question in my local Bookworld store. Here I found many books that I would class as natural history publications. Books about the landscape of Australia, the plants and animals. On the morning I undertook the survey there were well over one hundred books that fitted this category. Of these, about 27 were concerned with animals, 'including birds and reptiles' as one cover said.

'Including birds and reptiles' illustrates how animals are seen in the popular market place: they are usually mammals — the warm and cuddlies (Van Dyck, 1991). And what did my text book (Barnes, 1980) say? — 'One characteristic of a whole sub-phylum of animals is used as the basis for the separation of the entire Animal Kingdom into two groups.'

Most of the animal books were concerned with vertebrates, particularly mammals, and a few were concerned with both vertebrates and invertebrates. Of invertebrate books, the ones that made it onto the shelves were in the main: insects (mostly butterflies and to a lesser extent beetles), arachnids (mostly spiders) and some of the coelenterates. That is, the beautiful and the dangerous. There was only one book about insect pests of vegetables and one book about 'Insects...' and in much smaller print 'other

invertebrates'.

Basically 95 per cent of the fauna is invisible in Bookworld. If it is invertebrate and visible it is generally symbolic of either beauty and renewal, or death and dissolution. These are old themes which run through our western cultural tradition. Czechura (1994) noted similar themes in his analysis of public enquiries received at a museum.

And what did these books discuss? Let me briefly talk about two. *The living world of animals* (Readers Digest, 1971) discussed, according to the preface, animals in their natural surroundings and the past, the present and the future of animal life. The emphasis was on the orthodox scientific view of animal life. I turned to two chapters: one headed 'Man's place in the animal world', the other 'Animals in human culture'. Both chapters covered only two pages with illustrations taking up about half of the space. This is an extract of what I found (p. 357):

> Man's relationship with other species covers a wide range; he competes with many for food and living space; he exploits and preys on some; he dominates others by selectively breeding them, and he is host to parasites on or in his body.

It goes on to say

> ...that man has changed much of the natural habitats with agriculture and urbanisation but while some animals have been lost, others have benefited from these man made modifications.
>
> Many other animals help man... Even flies...help by breaking down dead organisms and bees pollinate flowers.

(I thought that this was happening well before man made his first wobbly steps into the African savanna).

> Man also has animal enemies and competitors for food.
>
> Some animals compete with man by attacking his food supplies and property...No animal species relies entirely on man.

And in 'Animals in human culture' (p. 364):

> Man's dependence on his fellow animals has always been coloured by such emotions as fear, reverence and curiosity and these have often found expression in art and literature.
>
> These expressions have been recorded in cave paintings and totemism.
>
> As civilisation developed, gods became less like animals and more like men. Just as often animals were represented as the dark side of creation.'

My response to this book was a picture of man (and 'man' expressively as the masculine) taking the centre stage with the other animals as lesser parts of his domain. Man the controller. And, as man becomes more 'civilised', the more distanced he becomes from his animal origins. This reflects another powerful story embedded in western culture and philosophy, that is the notion of dualism: culture/nature, spirit/body, male/female, good/evil.

The book also took the contribution of science as given, as though it was natural and had nothing to do with culture. This is a misleading story. Science is after all only a method of investigation — a powerful method, but still an invention of men to explain the world. Freud (1951) wrote that there were three major explanations of the world: animism, religion and science. On the contribution of science to the way we see animals and to the way we explain the world, *The living world of animals* makes no mention.

The second popular book was *Australia's dangerous animals* (Readers Digest, 1987). In the introduction, it states that:

> No kind of creature possesses a greater or more constant threat to human well being than ourselves...animals have power over us and offend our notion of mastery. Injuries, envenomations and infections from supposedly inferior beings excite resentment and even hatred. Such emotions often mask a primitive fear — our inheritance from ancient man's struggle to survive in a world inhabited by many more dangerous creatures than exist today.

After this warning, this publication goes on to excite readers with stories of ants as hazards in hospitals, where the immobile and helpless are slowly carted away by seething ants attracted to their bodily fluids. It then amuses with the story of two English sisters paddling knee deep in the Mediterranean when one was grabbed by an octopus (tentacles about 75cm in length). Her sister went to her aid and helped release her from the molluscs grasp. Subsequently, the sisters watched the story grow in the media. After some time the tentacles became 12m in length. The story of the octopus was eventually glossed to carry away two beautiful, young, American women to their death.

The book had other stories. Stories of fear — fear of death perhaps — where dissolution and the destruction are illustrated with tales of the effects of spider and snake venoms.

SOME OTHER ANIMAL STORIES

As well as these type of stories, there are other animal ones from our culture that are stories concerned with morality and 'proper' conduct. For example, there are stories of ants as role

models such as, 'Go to the ant thou sluggard'. There are sociobiological stories based on animal behaviour, and apparently legitimised by science, about how men and women should conduct themselves in human society (e.g. Wilson, 1975; Gould, 1977; Tiger, 1984).

There are other stories about brutal and bestial animal desires. Mary Midgley (1978) used wolves as an example of how particular animals have a 'folk figure that has been popular with philosophers'. She goes on to say (p. 27):

> I once read a chatty journalistic book on wolves, which described in detail how wolves trapped in medieval France used to be flayed alive, with various appalling refinements. "Perhaps this was rather cruel" the author remarked, "but then the wolf is itself a cruel beast" The words sound natural, it is quite difficult to ask oneself: do wolves in fact flay people alive? Or to take in the fact that the only animal that does this sort of thing is Homo sapiens. Another complaint the author made against wolves was their treachery. They would creep up on people secretly, he said and then attack so suddenly that their victims did not have time to defend themselves. The idea that wolves would starve if they gave fair warning never struck him. Wolves in fact, have traditionally been blamed for being carnivores, which is doubly surprising since most people who blamed them normally eat meat themselves....

People hide their dark sides in the supposed natures of other animals.

CONCLUSION

We tell a number of types of stories about animals and these stories serve different functions. In western culture, generally, some of the stores are about maintaining boundaries, boundaries concerned with dissolution and death, or social boundaries concerned with control and order. Others are stories of our control over nature where animals are symbols of nature — raw and brutal — and we humans are representative of civilisation and the highest spiritual realm.

There are stories that rationalise the past inequalities between men and women and cruelties to other human groups and other animals. There are stories that recognise only objective, rational knowledge and the control of natural forces. And stories that deny our dark and fearful selves in the motives and action of other animals. These stories reflect a complex of human responses (most of which are probably quite ancient) to, and explanations of, the world or worlds in which we live or have lived as a species.

In Australia we predominantly tell animal stories that are scientific stories. And, generally, these encapsulate notions of control and progress through evolution and empiricism, with an emphasis on content rather than poetical form. Also, science, itself, wears a belief that it is outside culture — another story.

This mix of stories is a recipe of alienation. It distances us from other life forms. As most Australians already live in a domesticated, urbanised world dominated by human artefacts, the mix enhances our sense of separateness and distance from the non-human.

If we are to promote a notion of the importance of species diversity, of a world rich in organic expression, then I suggest we need to fashion different stories about ourselves and the non-human world. Stories that are not about dualism, distance and domination: stories where our connection with the earth is important — important both pragmatically and spiritually.

We need to live as though our Father's mansions are on earth rather than elsewhere in time and space. We need to care for ourselves and for the earth with respect. These are not new ideas. Many people have suggested similar reactions to the constraints in our western culture (e.g. Martin, 1982).

These changes in scientific culture are not easy to achieve. Moreover, even if we do achieve them, we still might be going nowhere.

We do not act alone. The community in general — and public administrators and politicians in particular — also have to change. They, too, have to acknowledge the importance of the non-human world and integrate this respect into their own lives and endeavours. They, too, have to eschew behaviours that seek to control or exploit nature or radically refashion it. If they are not with us, biodiversity will continue to be destroyed with terrible losses of ecosystems and plant and animal species.

We are influential. As scientists, we can look carefully at the stories we tell, the language we use, and facilitate change, at least in part, by telling stories that celebrate and respect life and generously and poetically include both facts and feelings.

> Well I'll tell you about this story,
> about story where you feel...laying down.
> Tree, grass, star...
> because star and tree working with you.
> We got blood pressure
> but same thing.. spirit on your body,
> but e working with you.

Even nice wind e blow...having sleep...
because that spirit e with you.
Listen carefully this, you can hear me.
I'm telling you because earth just like mother
and father or brother of you. The tree same thing.
Your body, my body I suppose,
I'm same as you...anyone.
Tree working when you sleeping and dream.

Bill Neidjie (1989: 2-3).

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